tellum longitudinally elongate; medial carinæ of propodeum distinct, lateral carinæ very delicate; wings hyaline; coxæ æneous, the rest of the legs testaceous with the femora basally very slightly brownish; abdomen smooth.

Type locality: Batesburg, South Carolina.

Described from one specimen received from the Bureau of Entomology, U. S. Department of Agriculture, under Hunter No. 3415 (sublot) E. V. 81, issued July 11, 1913, from a leaf-miner on undetermined plant.

This species is easily distinguished from the other described North American species by the testaceous legs.

Type specimen, Cat. No. 18216, U. S. Nat. Mus.

TWO PORTO RICAN THYSANOPTERA FROM SUGAR CANE

By J. DOUGLAS HOOD

The two species of thrips recorded below as occurring on sugar cane in Porto Rico are both additions to the list of insects known to affect that plant, as well as to the known Thysanopterous fauna of the island itself. One is new to science and a rather anomalous member of the genus in which it is here placed; the other is a Holarctic greenhouse pest which has never before been reported from an outdoor habitat.

The only other papers on Porto Rican Thysanoptera were published by the writer in Volume I of this journal, pages 65–70 and 149–154.

Heliothrips femoralis Reuter.

1891. *Heliothrips femoralis* Reuter, Medd. Soc. Faun. et Fl. Fenn., Vol. XVII, p. 166.
1895. *Heliothrips cestri* Pergande, Ins. Life, Vol. VII, p. 391.
1895. *Heliothrips femoralis* Uzel, Monogr. d. Ordn. Thys., pp. 170, 458.
1896. *Heliothrips femoralis* Bergroth, Ann. Soc. Ent. Belg., Vol. XL, p. 67.
1899. *Heliothrips femoralis* Reuter, Acta Soc. Faun. et Fl. Fenn., Vol. XVII, No. 2, p. 39.
1902. *Heliothrips femoralis* Hinds, Proc. U. S. Nat. Mus., Vol. XXVI, p. 172, Pl. V, figs. 55, 56, Pl. VI, fig. 57.
1907. *Heliothrips femoralis* Buffa, Atti d. Soc. Tosc. d. Sci. Nat., Mem., Vol. XXIII, p. 63.
1908. *Heliothrips femoralis* Bagnall, Ent. Mo. Mag., 2d ser., Vol. XIX, pp. 6, 7 (footnote).

1908. *Heliothrips femoralis* Buffa, Redia, Vol. V, p. 135.
1909. *Heliothrips femoralis* Bagnall, Journ. Econ. Biol., Vol. IV, p. 39.

This is an abundant and destructive pest in the greenhouses of Finland, Sweden, Belgium, England, Italy, and the United States. Its native home has been open to conjecture, though its occurrence in greenhouses and the known distribution of the other species of the genus have suggested a Neotropical origin. Mr. Thomas H. Jones took one female from sugar cane at Rio Piedras, Porto Rico, January 20, 1914. Further collections and observations are necessary, however, before the species may safely be considered indigenous to the West Indies.

The following records add four States to its known distribution in North America: Ithaca, New York, April 15, 1912, J. C. Faure; Vienna, Virginia, September 16, 1913, R. A. Cushman; Urbana, Illinois, March 9, November 2, and November 20, C. A. Hart, R. D. Glasgow, J. J. Davis, and J. D. Hood; Champaign, Illinois, January, 1914, Alvah Petersen; Lincoln, Nebraska, February 13, March 10, and June 29, Lawrence Bruner. The specimens recorded above were all taken in greenhouses.

Haplothrips (?) tibialis, new species (fig. 1).

Female: Length about 1.2 mm. Color dark blackish brown, with a reddish cast due to amaranth purple[1] hypodermal pigmentation; all tibiæ and tarsi, and apices of fore femora, pale yellow; segment 3 of antenna yellow, segments 4–6 with basal two-thirds, half, and third, respectively, nearly white.

Head about 1.2 times as long as wide; cheeks parallel; vertex slightly produced, the anterior ocellus overhanging; dorsal and lateral surfaces almost free from sculpture, set with a few inconspicuous bristles; postocular bristles capitate, about 0.75 as long as eyes. Eyes one-third as long as head in dorsal aspect, not protruding, rounded; on ventral surface of head produced posteriorly in an acute angle, and 1.4 times their dorsal length. Posterior ocelli opposite a line drawn behind anterior third of eyes. Antennæ about 1.7 times as long as head, noticeably slender; exposed portion of segment 1 two-thirds as long as 2 and three-fourths as long as wide; segment 2 about 1.6 times as long as wide; 3 subconical, nearly twice as long as wide, slightly shorter than 4; 4–6 successively shorter, nearly barrel-shaped, pedicellate; 7 oblong, briefly pedi-

[1] Robert Ridgway. Color Standards and Color Nomenclature, Pl. XII, 1912.

cellate, 2.5 times as long as wide; 8 three times as long as wide and three-fourths as long as 7; sense cones moderately long and slender; formula: 3, 1–2; 4, 2–2; 5, 1–1^{+1}; 6, 1–1^{+1}; 7 with one on dorsum near apex. Color of antennæ: Segments 1 and 2 concolorous with

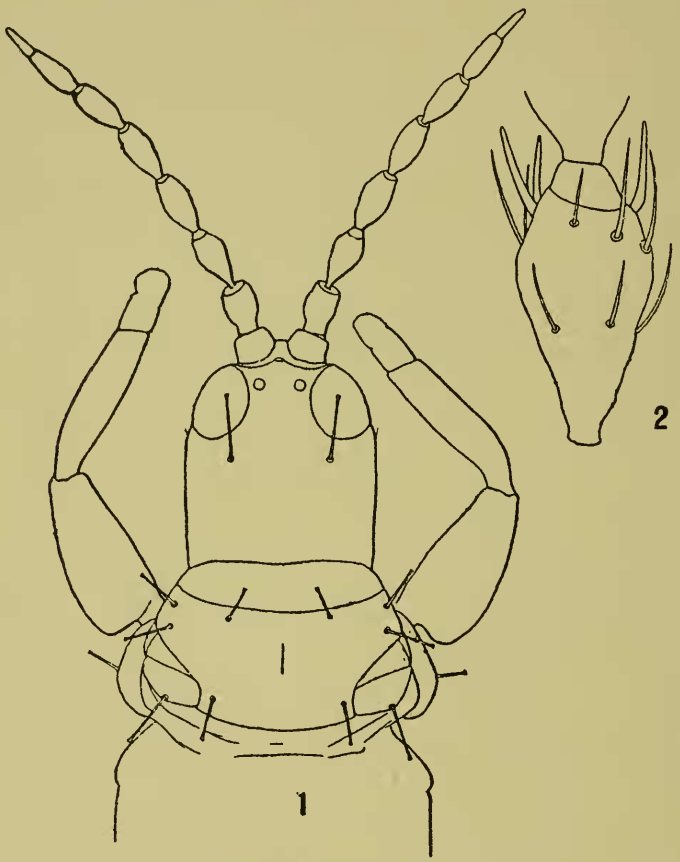

Fig. 1.—HAPLOTHRIPS (?) TIBIALIS Hood

1. Head and prothorax, female, greatly enlarged; holotype.
2. Segment 3 of left antenna, female, greatly enlarged; holotype.

head; 3 pale yellow, sometimes slightly grayish at sides of apex; 4–6 with basal two-thirds, half, and third, respectively, yellowish white; remainder of antenna neutral gray, the last two segments thus distinctly lighter than basal two. Mouth cone normal to genus.

Prothorax slightly more than half as long as head and (inclusive of coxæ) about 2.65 times as wide as long; surface smooth, with median thickening near middle; all bristles stout, capitate, and subequal in length, the posterior angulars longest and nearly equal in length to postoculars; coxal bristles shorter, capitate. Pterothorax not wider than prothorax; sides nearly straight, slightly converging posteriorly. Wings not narrowed at middle, sparsely fringed, lightly shaded with brown, and with faint median dark line; fore wings with three or four interlocated hairs on posterior margin. Fore tarsi unarmed.

Abdomen slightly wider than pterothorax. Tube two-thirds as long as head and about 2.2 times as long as basal width, which is slightly more than twice the apical. Abdominal bristles pointed, brownish; terminal bristles 0.8 as long as tube.

Measurements of holotype: Length 1.16 mm.; head, length 0.180 mm., width 0.151 mm.; prothorax, length 0.096 mm., width (inclusive of coxæ) 0.254 mm.; pterothorax, width 0.252 mm.; abdomen, width 0.264 mm.; tube, length 0.120 mm., width at base 0.056 mm., at apex 0.027 mm. Antennal segments: 1, length 27μ, width 33μ; 2, length 41μ, width 26μ; 3, length 47μ, width 25μ; 4, length 49μ, width 25μ; 5, 47μ; 6, 45μ; 7, 40μ; 8, 30μ; total length of antenna 0.33 mm.

Described from nine females taken at Rio Piedras, Porto Rico, January 20, 1914, by Mr. Thomas H. Jones, of the Porto Rico Sugar Producers' Experiment Station. Mr. Jones's notes say that the specimens were "collected from leaves of shorter, smaller, stalks of sugar cane. Characteristic thrips injury was noted on the leaves, especially where surfaces of the same leaf had been drawn close together by an Hesperid larva or from some other cause, thus forming a shelter."

The tibial coloration, the presence of two sense cones on the outer surface of the third antennal segment, the prolongation of the eyes on the ventral surface of the head, and the form of the wings, are indicative of a very distinct species. The last two characters are possibly of generic value, though several species ordinarily placed without question in the present genus have the wings only slightly more narrowed at middle. The facies of the insect is that of a true *Haplothrips*.